Section D
Spent Nuclear Fuel

PROJECT MANAGERS
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SUMMARY

The Spent Nuclear Fuel (SNF) mission consists of the Spent Nuclear Fuel Project (SNFP) WBS 1.3.1.1 (Project Baseline Summary [PBS] WM01) and the subsequent Canister Storage Building (CSB) Operations Project WBS 1.3.2.1 (PBS WM02), which does not start until FY 2004.

NOTE: Unless otherwise noted, the Safety, Conduct of Operations, Milestone Achievement, and Cost/Schedule data contained herein is as of May 31, 2001. All other information is as of June 21, 2001, unless otherwise noted.

Fiscal year-to-date milestone performance (EA, HQ, and RL) showed that three out of four milestones (75 percent) were completed late and one milestone is overdue.

The Milestone Achievement details, found following the cost and schedule variance analysis, provide further information on all milestone types.

NOTABLE ACCOMPLISHMENTS

Fuel Movement Activities — Fourteen Multi-Canister Overpacks (MCOs) (292 canisters – 4088 fuel assemblies) have been removed from K West (KW) Basin for a total of 65.90 Metric Tons of Heavy Metal (MTHM) shipped. The fourteenth MCO was shipped to the Cold Vacuum Drying (CVD) Facility from K West Basin on June 22, 2001 and is currently being processed at the CVD Facility.

The eleventh MCO was shipped from the CVD Facility to the Canister Storage Building (CSB) on June 11, 2001, the twelfth on June 17, 2001 and the thirteenth on June 19, 2001.

Progress with KW modifications continued. The manually operated fuel handling tables are installed, grating modifications are complete, and preparations for receipt of the handling tools and transfer crane are on track. Plans are to complete testing during the last week of June to the first week of July, and put the equipment into operation as KW completes its July maintenance outage.

Production Integration Activities — In work: the implementation of a priority system to accomplish work that focuses on corrective maintenance necessary to continue SNFP facility operations and preventive maintenance to support the facilities' Authorization Basis documentation. Currently, Engineering, Planning, Work Control and Maintenance are working to the same goals established by the Facility Managers. Completed all Process Water Conditioning (PWC) system modifications to facilitate PWC water transfer from the CVD to KW or the Effluent Treatment Facility. First transfer of PWC from CVD to KW completed successfully.

K Basins Construction Projects — Completed conceptual phased estimate for the Fuel Transfer System (FTS) and received FTS cask quotes from vendors. Issued a request for proposal for one additional MCO cask and trailer. Completed all pre-outage KW improvement modifications that included electrical modifications, installation of three empty basket stands, and installation of two secondary process tables.

In the K East (KE) Basin, construction activities continued: closeout of construction work packages based on approval of the Alternate Fuel Transfer Strategy (AFTS) continued; Corridor 7 and Stairwell 6 modifications were completed; monorail upgrades and painting of crane rails were completed; the installation of basin heaters continued; one Environmental Restoration Disposal Facility (ERDF) container was shipped and one was received, and a container was prepared for continued debris removal activity.

Site-Wide SNF Integration Activities — Shippingport fuel removal dry runs were initiated at T Plant. The first Shippingport spent fuel canister was received from Joseph Oat, Inc. Preparations continued for F/H Reactor basins fuel receipt, including completion of tool fabrication and the PAS-1 Cask Safety Analysis

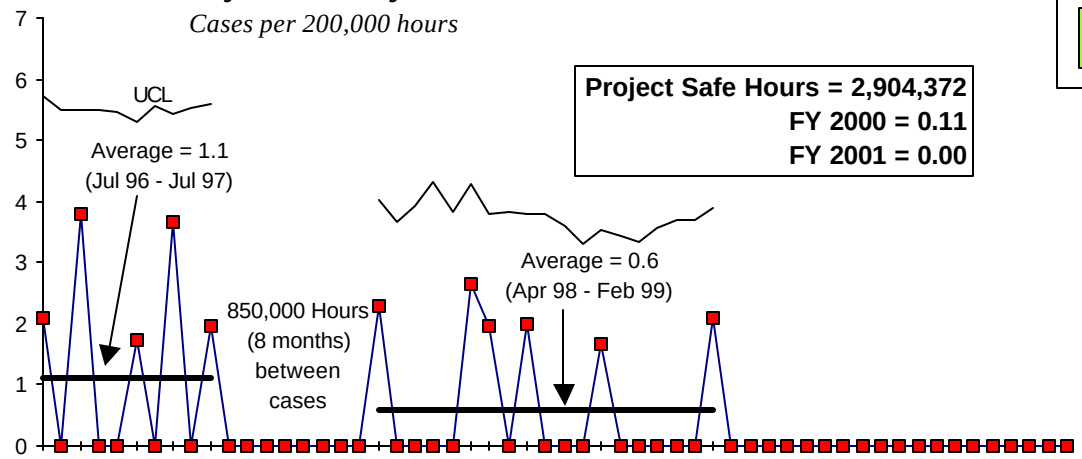
Report for Packaging (SARP) approval. Authorization Basis implementation for Shippingport fuel receipt and storage at the CSB progressed on schedule, including the completion of draft operating procedures. The technical evaluation for the 324 Building fuel removal project was completed. The Notice of Construction for work in T Plant was completed, and transmitted to the Washington Department of Health. In addition, stakeholder comments to the Environmental Assessment were resolved.

MCO Production Rate Improvement Activities — Addressed in Fuel Movement Activities section above.

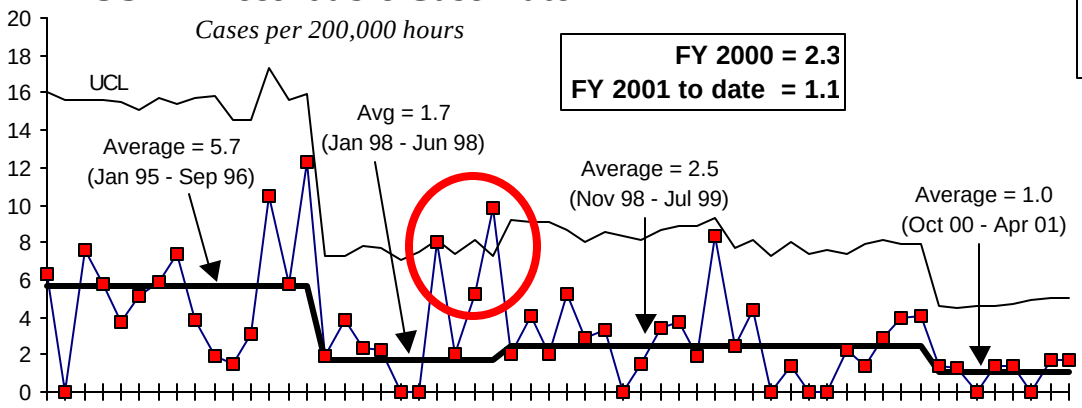
SAFETY

The Spent Nuclear Fuel Project (SNFP) has achieved nearly three million safe work hours. No Lost Away Workday Cases have been reported in 21 months. The SNFP OSHA recordable case rate for FY 2001 to date has been favorable, and now shows a statistically significant reduction as the case rate has been below average for eight months in a row. SNFP reached three million safe hours at the end of June 2001. There was also a reduction in the number of first aid cases during both May and June.

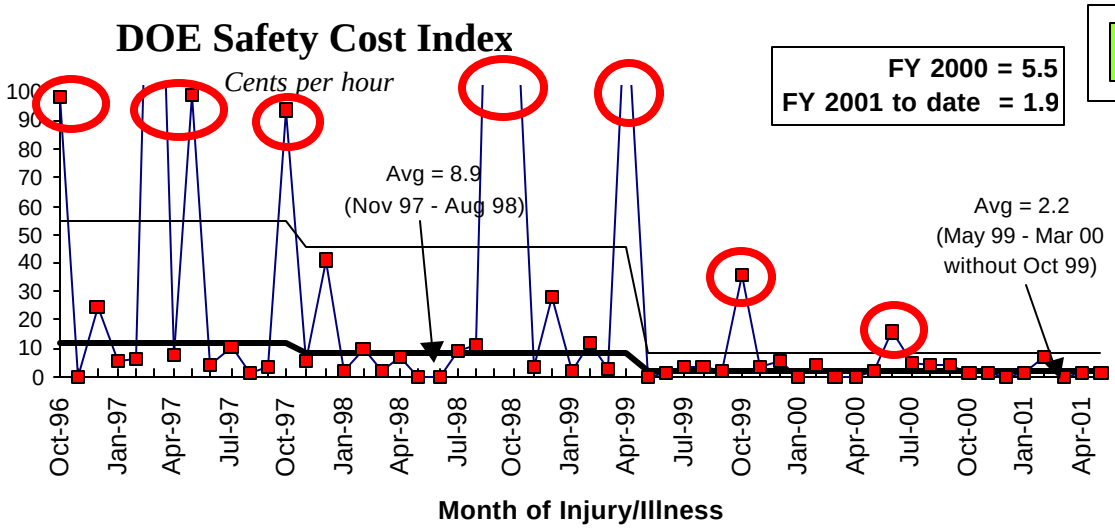
Lost Away Workday Case Rate



OSHA Recordable Case Rate



DOE Safety Cost Index



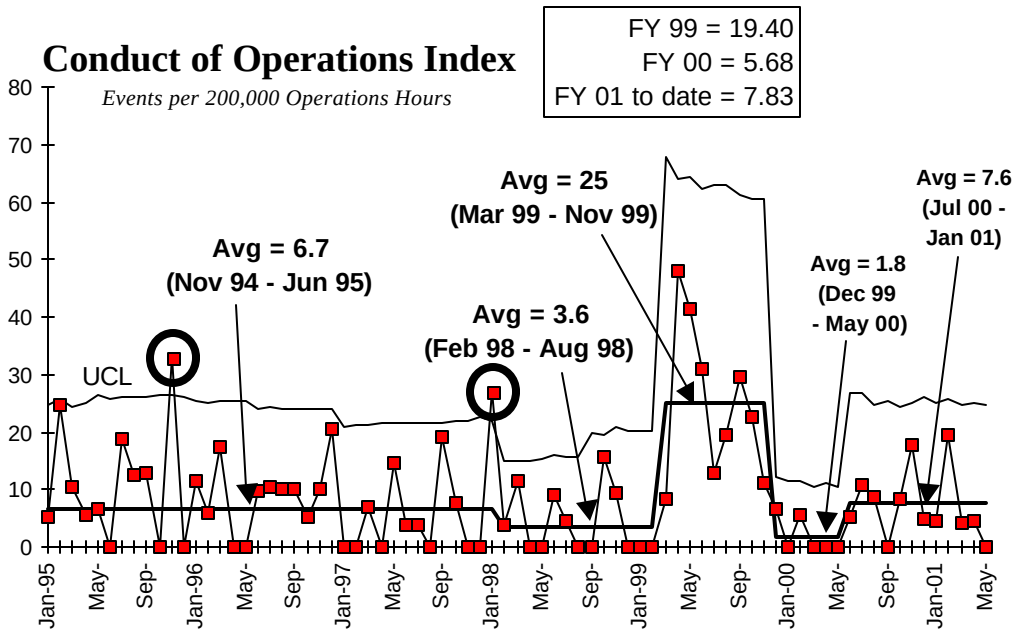
ISMS Status

SNF Project personnel continue to demonstrate a commitment to ISM in "Doing Work Safely". Several examples of this include:

- Coordinated efforts of maintenance, operations and radiological protection organization personnel in removal of the KE divider wall brace.
- Successful completion of the first outage cycle by maintenance and operations personnel.
- Teaming of Operations and Construction staff to complete the final design of the KE fuel removal process and subsequent approval of the Comprehensive BCR.

Conduct of Operations

Green



A "Time Out for Safety" was conducted following the shipment of the sixth MCO. In an effort to raise the projects focus on worker safety and conduct of operations, a weekly review of lessons learned and occurrence reports is conducted at the opening of the SNF Project senior staff meeting. Trends are reviewed, root causes discussed and follow-up actions assigned. A lessons-learned session was also conducted following the very successful completion of the maintenance outage (during which not even one first aid incident occurred). Meetings to strengthen expectations with shift managers, field work supervisors/Person(s) in Charge, and union stewards are underway.

Breakthroughs / Opportunities for Improvement

Breakthroughs

Green

SNF Accelerated Closure Team (ACT) – The ACT has identified several prospective improvements and breakthroughs that have the potential to further reduce fuel removal processing times and accelerate the completion of the Project. Potential breakthroughs consist of initiatives that could reduce MCO drying, simplify sludge removal and accelerate the project transition to the River Corridor contractor. These initiatives are now being actively evaluated.

MCO Production Rate Improvements – The manually operated fuel handling tables are installed, grating modifications are complete, and preparations for receipt of the handling tools and transfer crane are on track. Plans are to complete testing during the last week of June to the first week of July, and put the equipment into operation as KW completes its July maintenance outage.

Opportunities for Improvement

None to report at this time.

Upcoming Activities

- Continue MCO shipments through FY 2001.
- Complete implementation of Safety Authorization Basis for receipt and storage of Shippingport (PA) SNF at the CSB in June 2001.
- Complete fuel production rate improvements July 2001
- Conduct second SNFP maintenance outage July 2001.
- Receive and install the KW Cask Loadout System crane in July 2001.
- Initiate KW Basin spent nuclear fuel canister cleaning operations August 2001.
- Complete Standard Startup Review for Shippingport SNF receipt and storage at CSB by September 2001.
- Receive all Shippingport Spent Fuel Canisters by September 2001.
- Approve start of construction for the K-East and K-West facility modifications for AFTS in September 2001.

Milestone Achievement

Yellow

MILESTONE TYPE	FISCAL YEAR-TO-DATE				REMAINING SCHEDULED			TOTAL FY 2001
	Completed Early	Completed On Schedule	Completed Late	Overdue	Forecast Early	Forecast On Schedule	Forecast Late	
Enforceable Agreement	0	0	1	0	0	0	0	1
DOE-HQ	0	0	0	0	0	1	0	1
RL	0	0	2	1	0	0	0	3
Total Project	0	0	3	1	0	1	0	5

Only TPA/EA milestones and all FY2001 overdue and forecast late milestones are addressed in this report. Milestones overdue are deleted from the Milestone Exception Report once they are completed. The following chart summarizes the FY2001 TPA/EA milestone achievement and a Milestone Exception Report follows. The last milestone table summarizes the first six months of FY 2002 TPA/EA milestones.

FY 2001 Tri-Party Agreement / EA Milestones

Number	Milestone Title	Status
M-34-16 (DOE-HQ Milestone No. S00-01-900)	**"Initiate Removal of K West Basin Spent Nuclear Fuel"**	**Due 11/30/00 –** Completed on December 7, 2000. **Green**
M-34-06-T01 (RL Milestone No. S04-99-521)	**"Initiate K West Basin Spent Nuclear Fuel Canister Cleaning Operations"**	**Due 12/31/00 –** Overdue. Forecast start, August 31, 2001. Completion of Canister cleaning operations is driven by the fuel removal schedule. No additional impacts projected. **Yellow**
M-34-26-T01 (DOE-HQ Milestone No. S15-02-002)	**"Approve Start of Construction for the K East and K West Basin facility modifications for AFTS"**	**Due 09/30/01 –** On Schedule. **Green**

DNFSB Commitments

	Nothing to report at this time.	

Milestone Exception Report

Number/WBS	Level	Milestone Title	Baseline Date	Forecast Date

Overdue – 1

S04-99-521 **RL** Start K West Canister Cleaning Operations 12/31/00 8/31/01
1.3.1

Cause: Suspended design last summer to simplify system and reduce costs. SNF Project made a project management decision to defer work to FY 2001 and focus on near-term critical path items.

Impact: No impact to any other SNF Project baseline schedule activities or TPA/DNFSB milestones.

Corrective Action: Currently in design and on schedule; to be started by August 31, 2001.

Forecast Late – 0

FY 2002 Tri-Party Agreement / EA Milestones

Number	Milestone Title	Status
M-34-29 ****NEW**	**"Complete K East Basin and K West Basin facility modifications for AFTS cask transportation system"**	**Due 03/31/2002** On Schedule *This Milestone added per Tri-Party Agreement Change Package M-34-01-02.
M-34-12-T01 (S04-97-621) ****Changed to target date**	**"Complete Construction of K East Basin Integrated Water Treatment System (IWTS) to Support Spent Nuclear Fuel Removal"**	**Due 09/30/2002** On Schedule *Interim milestone changed to target date per Tri-Party Agreement Change Package M-34-01-02.

DNFSB Commitments

	Nothing to report at this time.	

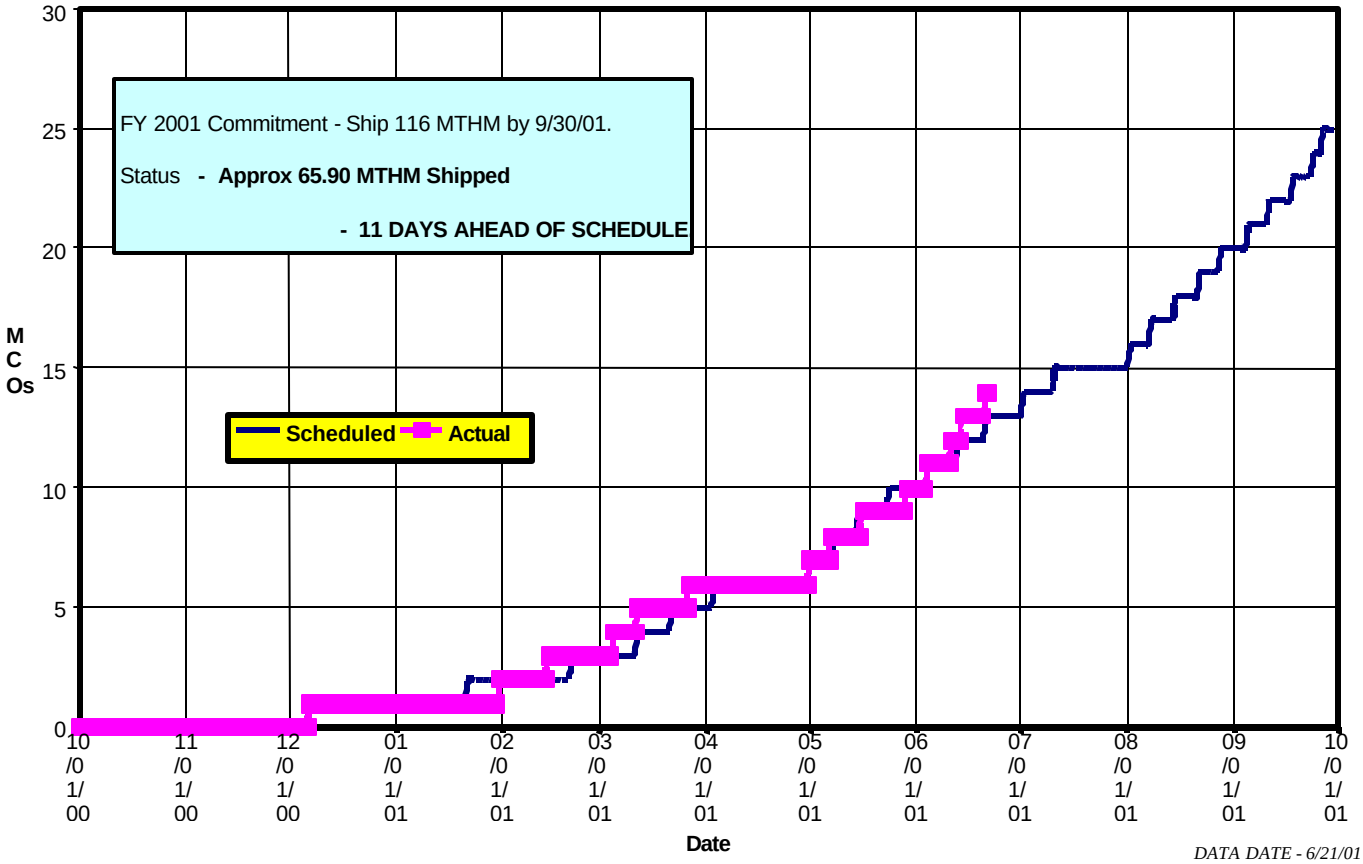
PERFORMANCE OBJECTIVES

Move Fuel Away from the River

EXPECTATION: Remove spent fuel from K Basins
Move first MCO of SNF from KW Basin and transport to the CVD Facility for processing by December 7, 2000 (TPA M34-16)
Status: Completed on schedule.

Move 116 Metric Tons Heavy Metal from KW Basin by end of FY 2001
Status: On schedule.

FY 2001 MCO Baseline Production



DATA DATE - 6/21/01

The fourteenth MCO was shipped to the CVD Facility from K West Basin on June 22, 2001. The eleventh MCO was shipped to the Canister Storage Building (CSB) on June 11, 2001, the twelfth MCO was shipped to the CSB on June 17, 2001, and the thirteenth MCO was shipped to the CSB on June 19, 2001. The fourteenth MCO is currently being processed at the CVD Facility.

FY 2001 Schedule / Cost Performance – All Fund Typ Cumulative to Date Status – ($000)

Green

PBS	FYTD Summary BCWS	BCWP	ACWP	SV	%	CV	%	BAC	EAC
FH Managed									
PBS WM01 Spent Nuclear Fuel WBS 1.3	$ 114,771	$ 110,866	$ 110,294	$ (3,905)	-3%	$ 572	1%	$ 188,014	$ 185,437
Client Furnished Materials	$0	$0	$283	$0	-	$ (283)	-	-	-
Total	$ 114,771	$ 110,866	$ 110,577	$ (3,905)	-3%	$ 289	0%	$ 188,014	$ 185,437

Authorized baseline as per the Integrated Planning Accountability, and Budget System (IPABS) – Project Execution Module (PEM).
Note: Above data includes RL contract for Steam.

FY to Date Schedule / Cost Performance

FYTD, SNFP is behind schedule. SNFP cost and schedule figures now reflect incorporation of the Accelerated Fuel Transfer Strategy (AFTS) baseline changes, which more accurately portrays current performance. The unfavorable schedule variance of $3.9 million (3 percent) was due to delays in the 200 Area Interim Storage Area (ISA) and sludge design for wet storage.

For all active sub-PBSs and TTPs associated with the Operations/Field Office, Fiscal Year to Date (FYTD) Cost and Schedule variances exceeding + / - 10 percent or one million dollars require submission of narratives to explain the variance.

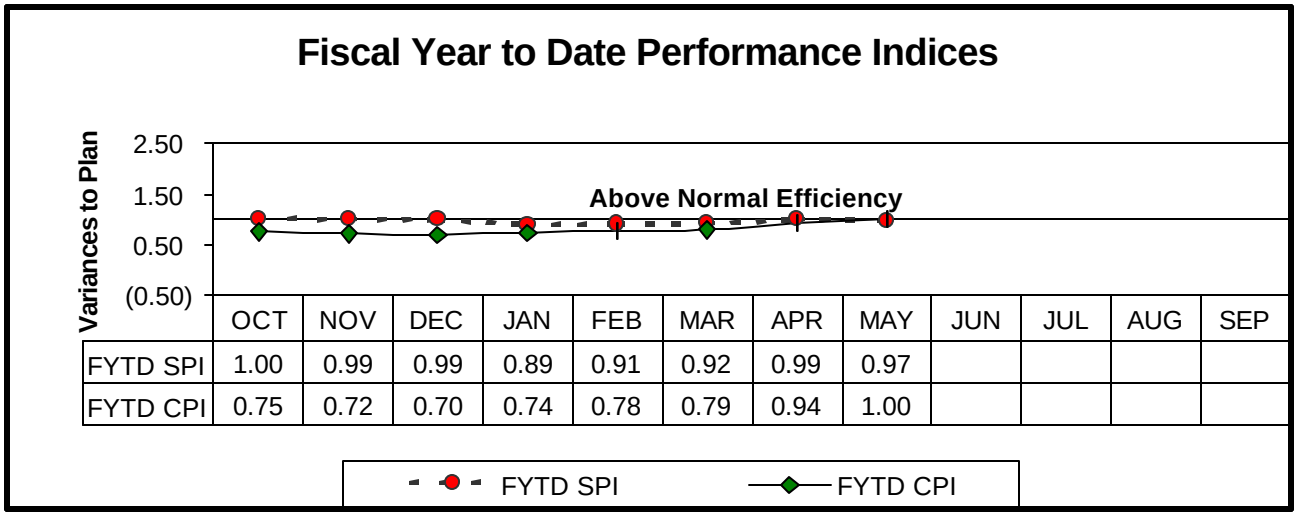
Schedule Variance Analysis: (-$3.9M)

Spent Nuclear Fuel Project — 1.3.1/WM01
Description /Cause: The unfavorable schedule variance is due to delays in the 200 Area Interim Storage Area (ISA) and sludge design for wet storage.
Impact: Potential impacts to future milestones.
Corrective Action: A BCR is being processed that reschedules the 200 Area ISA work within available project float. The wet storage design requirements are being evaluated for elimination (BCR pending).

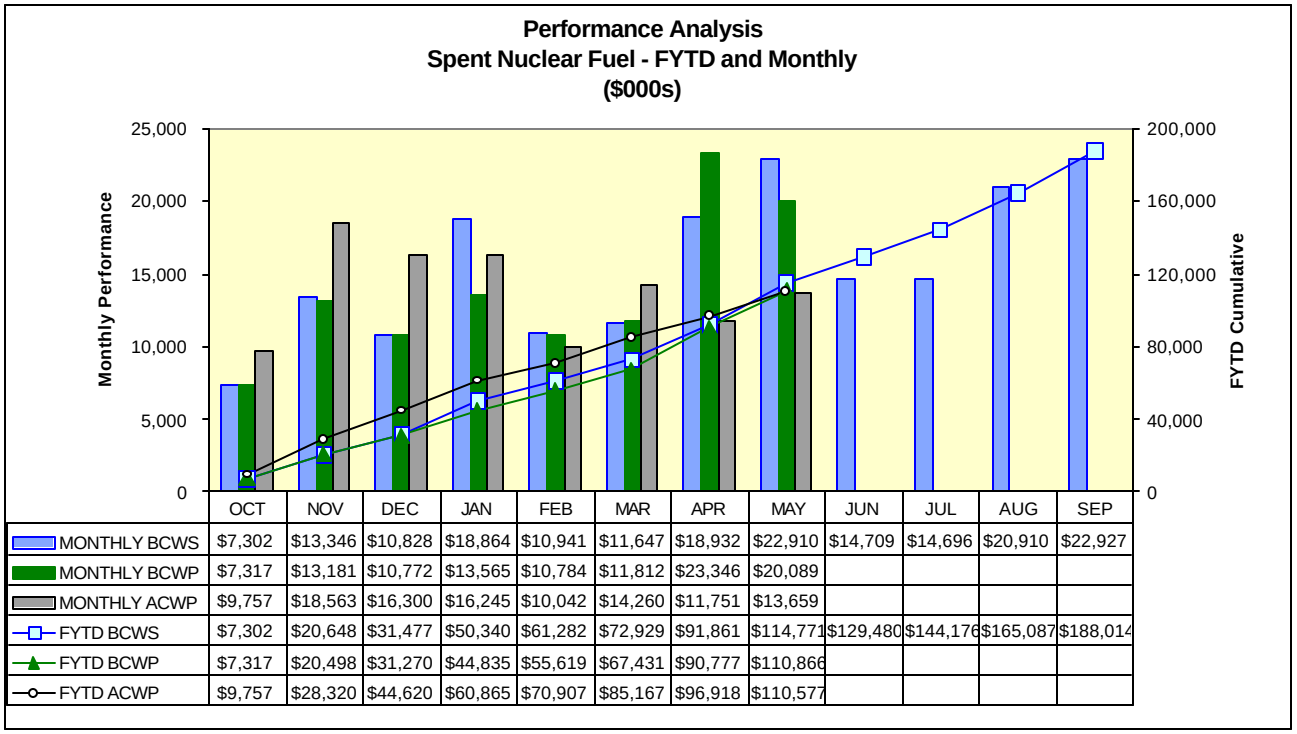
Cost Variance Analysis: (+$0.3M)

Spent Nuclear Fuel Project — 1.3.1/WM01
Description/Cause: Insignificant.
Impact: None to report.
Corrective Action: None required.

COST/SCHEDULE PERFORMANCE (MONTHLY AND FYTD)



	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
FYTD SPI	1.00	0.99	0.99	0.89	0.91	0.92	0.99	0.97				
FYTD CPI	0.75	0.72	0.70	0.74	0.78	0.79	0.94	1.00				



	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MONTHLY BCWS	$7,302	$13,346	$10,828	$18,864	$10,941	$11,647	$18,932	$22,910	$14,709	$14,696	$20,910	$22,927
MONTHLY BCWP	$7,317	$13,181	$10,772	$13,565	$10,784	$11,812	$23,346	$20,089				
MONTHLY ACWP	$9,757	$18,563	$16,300	$16,245	$10,042	$14,260	$11,751	$13,659				
FYTD BCWS	$7,302	$20,648	$31,477	$50,340	$61,282	$72,929	$91,861	$114,771	$129,480	$144,176	$165,087	$188,014
FYTD BCWP	$7,317	$20,498	$31,270	$44,835	$55,619	$67,431	$90,777	$110,866				
FYTD ACWP	$9,757	$28,320	$44,620	$60,865	$70,907	$85,167	$96,918	$110,577				

FUNDS MANAGEMENT
FUNDS VS SPENDING FORECAST ($000)
FY 2001 TO DATE

	Project Completion *			Post 2006 *			Line Items *		
	Funds	FYSF	Variance	Funds	FYSF	Variance	Funds	FYSF	Variance
The River									
1.3 Spent Nuclear Fuel									
WM01 Operating	$ 186.462	$ 179.022	$ 7.440						
Line Item							$ -	$ -	$ -
Total Spent Nuclear Fuel Operating	**$ 186.462**	**$ 179.022**	**$ 7.440**						
Total Spent Nuclear Fuel Line Item							$ -	$ -	$ -

*** Control Point**

The Funding Variance will be carried over to FY2002 to fund the Sludge Water System (SWS) and MCO shipments.

ISSUES

Regulatory Issues

Issue: Nothing to report at this time.
Impacts: None.
Corrective Action: None at this time.

Technical Issues, and External and DOE Issues and DOE Requests

Issue: If the simplification of the CVD SAR is not approved, commitments to savings may not be achieved.
Impacts: Significant cost to maintain safety class systems will result.
Corrective Action: Incorporation of DOE comments to SAR in progress. Continuing to work with RL staff in hopes of reaching agreement between DOE and the Defense Nuclear Facilities Safety Board.

BASELINE CHANGE REQUESTS CURRENTLY IN PROCESS

PROJECT CHANGE NUMBER	DATE ORIGIN.	BCR TITLE	FY01 COST IMPACT $000	SCH	TECH	DATE TO FH RMB	RMB APR'VD	RL APR'VD	CURRENT STATUS
SNF-2001-015	04/23/2001	SNFP Phase I Activities of DOE Implementation Plan for DNFSB 2000-2	12	N	Y	05/02/2001	06/11/2001		Approved by RMB.

ADVANCE WORK AUTHORIZATIONS									
None									

KEY INTEGRATION ACTIVITIES

- SNF final disposition interface activities are ongoing with the National SNF Program, including Office of Civilian Radioactive Waste Management (OCRWM) Quality Assurance (QA) Program implementation. OCRWM QA Program Plan was revised to incorporate Waste Management activities for fuel removal at T Plant.

- The SNF Project and Waste Management Project continued preparations for Shippingport (PA) Pressurized Water Reactor Core 2 SNF removal. The first Shippingport Spent Fuel Canister was received.

- The SNF Project and the River Corridor Project interfaced on 324 Building (B Cell) SNF removal. The authorization to proceed was provided to Mid-Columbia Engineering (MCE) on the 324 Building fuel removal contract.

- Neutron Radiography Facility Training Research along with Isotope Production General Atomics (TRIGA) and Fast Flux Test Facility (FFTF) SNF relocation planning is ongoing with the FFTF Project.

- Activities continued for potential receipt of SNF discovered by Bechtel Hanford Inc. during upcoming 105F and 105H reactor basins deactivation at K Basins.

- The Sludge Handling Project and T Plant Operations continued preparations for K Basin sludge storage at T Plant.